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ABSTRACT

The enormous but often overlooked impact of energy resource development on small Western United States communities can be illustrated by the experiences of the traditional coal mining town of Hanna, Wyoming. Coal development doubled the population between 1970 and 1972, and required the addition of a sewer system and a police force, plus the improvement of the water system, supported by a bond issue and federal loans. The community still did not have adequate housing, medical services, paved roads, recreational facilities, or uncrowded schools by 1972. Hanna had gone into debt for relatively few improvements, taxes were up dramatically, the tax base was not expanding, and the decline of per capita services was a possibility. To maximize benefits and minimize costs to communities similarly impacted by energy development, the state should require energy developers to file impact statements regarding the expected effect on local government, land use, population, and economy. Comprehensive community planning should begin prior to a boom and schools should consider the needs of energy industries in their curricula. Finally, an impact tax should be added to the severance tax and paid to impacted communities to turn some of the costs of energy development into local benefits. (SB)

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WHAT DOES ENERGY DEVELOPMENT MEAN FOR WYOMING?

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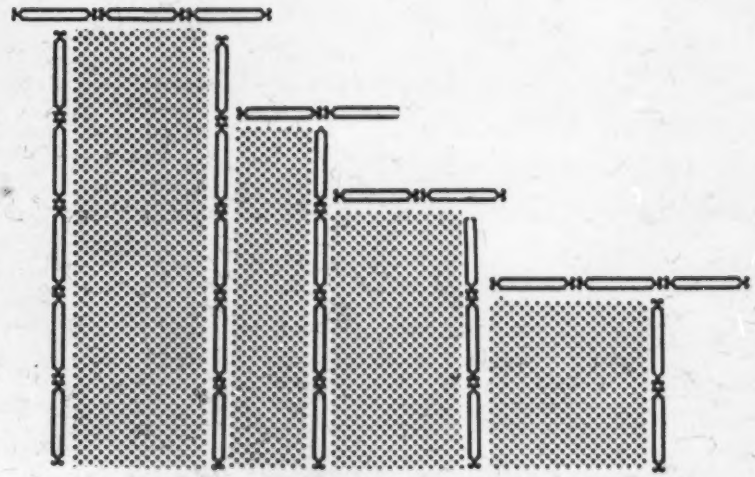

RC 011307

WHAT DOES ENERGY DEVELOPMENT MEAN FOR WYOMING?

A Community Study at Hanna, Wyoming

by

Lee Nellis

Research Assistant

Office of Special Projects
University of Wyoming

1974

Author's Statement

The author is a Research Assistant to the Office of Special Projects, Division of Adult Education and Community Service, University of Wyoming.

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Abstract

This study deals with a not so often discussed aspect of the current "energy crisis", the impact of energy resource development on small Western United States communities. As these resources are developed, many communities will be faced with significant changes in population, life styles, and land use patterns. Most citizens hope to benefit from these developments, but they have anxieties, too, anxieties probably best summed up in the question, "Who will our new neighbors be?"

For local government and school officials the anxieties accompanying energy resource development are heightened. How can local institutions deal with all these new people? Where will the newcomers live and how will they be provided with basic services? Where is the money for all this coming from?

Answers to the questions of citizens and officials are a necessary part of the base for making decisions about the true value of development. Unfortunately, the answers are largely lacking and the developments are imminent. This study was designed to provide some answers about development impacts based on the experience of one community, Hanna, Wyoming.

Less than 100 years ago homesteaders in Wyoming's Powder River country repelled an invasion of gunmen recruited to defend the cattle industry against "rustlers". The stockman wanted open range and his way of life. The homesteader wanted farms and fences - his way of life. The sides were clear and the resolution of the matter quite straightforward. In the 1970's a similar situation is developing. This new confrontation is between the citizens of a sparsely populated, agricultural state and the energy needs of an urban, industrial nation - those needs being made manifest in the persons of energy resource developers. Not less than either homesteader or stockman does the concerned citizen of Wyoming or the power consumer in California want to preserve his own way of living.

It would be well if the confrontations of the 1970's could be as clear as those of the 1890's. Unfortunately, the sides are not so well defined and the means of resolution is far from apparent. With this energy development question come all the complexities of a world ecosystem and an international political system. Where the decisions are made is something no longer easily known or even surmised. Are decisions about energy development in Wyoming made in the state? In this country, even? By a clique of Arab sheiks? Or is it Adam Smith's "unseen hand" of the market that we have to deal with? Wherever the decisions to develop resources are made, it is obvious that the decisions about dealing with these developments will be made at state, local, and individual levels in Wyoming. It is at these levels that benefits and costs must be calculated. It is at these levels that the conflicts will be experienced rather than read about in the papers and it seems certain that these conflicts cannot be resolved by anything simple.

Energy resource development poses a series of complex questions for the people of Wyoming, questions of benefits and costs. The classical question of politics is supposed to be who gets what, when and how. That is the question of the energy development issue as well. What will the citizens of Wyoming get? Certainly it has been shown that people do not always get what they expect from such developments - the positive expectations and negative results experienced during water resources developments have been discussed for this country (Smith 1971) and others (Gonzalez 1972). Work in Utah has demonstrated that opinions about impending developments are seldom formed on the basis of adequate or accurate information (Albrecht 1972). This study is an attempt to add to the information available by looking at some questions of costs and benefits in one energy resource development boom already well under way.

Hanna

During 1971 and 1972 the Energy Development Corporation and Arch Minerals Corporation moved into the Hanna, Wyoming area with substantial investments in both underground and surface mining of coal. The Rosebud Coal Sales Company had been in the area since 1962. With the new demand for low sulfur coal the fields at Hanna seemed much closer to midwestern consumers (See Figure 1). The boom was on.

Located in Carbon County, Wyoming, in an area of low, sagebrush covered hills, Hanna had always been a coal town. The first mining in the vicinity was ar Carbon, beginning in 1868 when the Union Pacific tracks came through. The deposits at Carbon were depleted by 1902 (Annals of Wyoming 1947), but the railroad anticipated this by several years. Hanna began as a tent

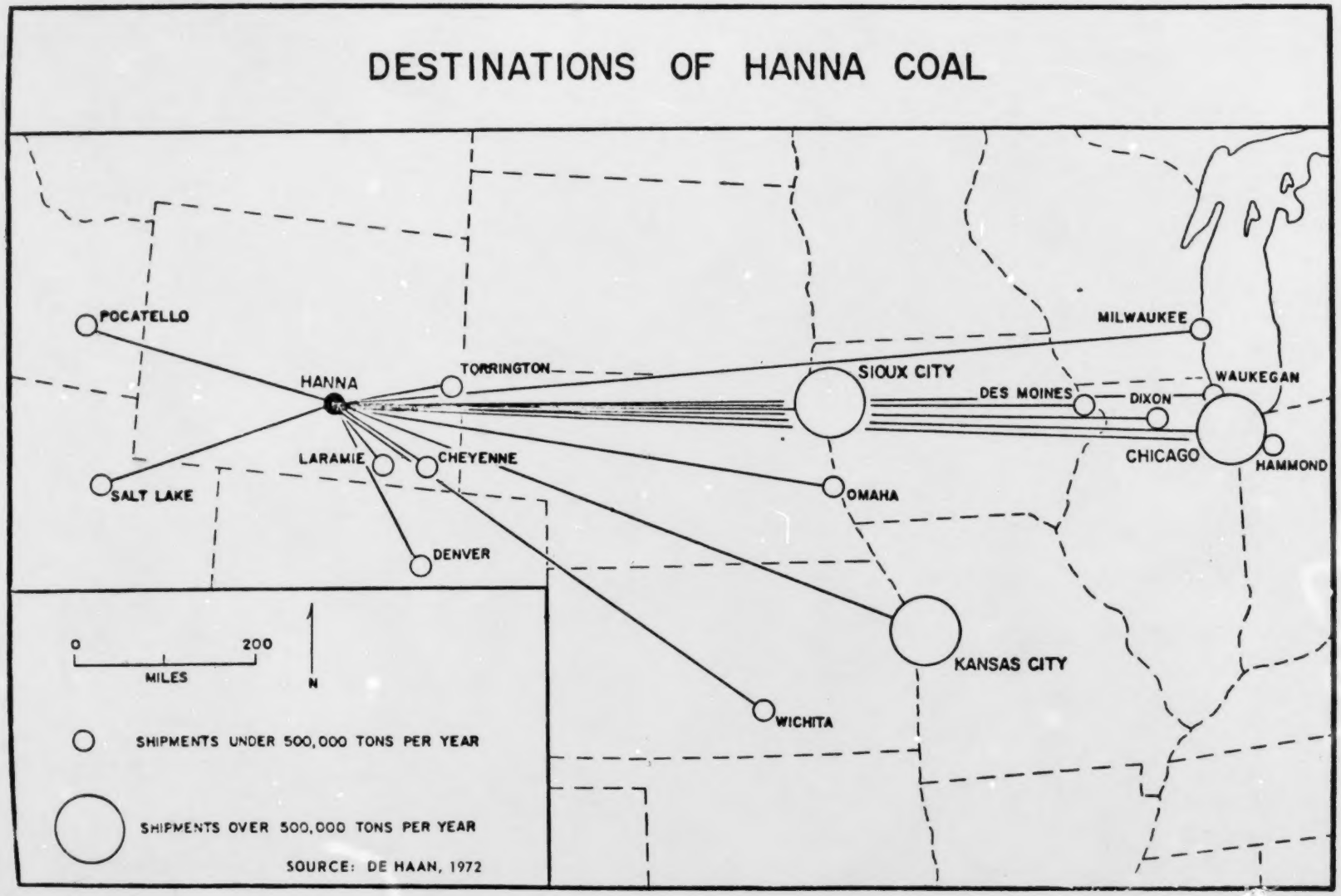

DESTINATIONS OF HANNA COAL
POCATELLO
HANNA
TORRINGTON
MILWAUKEE
SIOUX CITY
WAUKEGAN
DES MOINES
DIXON
CHICAGO
HAMMOND
LARAMIE
CHEYENNE
SALT LAKE
OMAHA
DENVER
KANSAS CITY
WICHITA
0
200
MILES
N
SHIPMENTS UNDER 500,000 TONS PER YEAR
SHIPMENTS OVER 500,000 TONS PER YEAR
SOURCE: DE HAAN, 1972

FIGURE 1
3

town in 1889, streets were laid out in 1890, a source of good drinking water was established in the form of a 19 mile pipeline from Rattlesnake Creek, and in 1899 the mainline of the Union Pacific was re-routed through Hanna. Despite all this investment by the company, the evidence is that the inhabitants felt Hanna to be a temporary "camp" with Carbon being the real center, indeed, old timers from Hanna may still be laid to rest at the Carbon cemetery (DeHaan 1972). This temporary feeling certainly seems to be characteristic of towns of single industry in their early years (Lucas 1971; pp. 44-70). It took two gruesome mine disasters to pull the community together. In 1903 the Number One Mine exploded - 169 men were lost - and in 1908 the same mine exploded again, 18 men inside the mine perished as did a 40 man rescue team (U.P. Oldtimers Edition 1939; p. 73). These disasters seem to have bound the community very closely together, nearly everyone was a "survivor" after the explosions. The close-knit feelings and community cooperation of the "good old days" are fondly remembered by the oldtimers. Hardly an issue of the recently begun weekly goes by without an article featuring old photographs or the reminiscenses of some real oldtimer.

The bust began in the depression with severe underemployment. During the war the economy bounced back, but in 1947 or 1948 the first diesel locomotive rolled through town. Ironically enough, the miners and their families cheered it on as it passed (DeHaan 1972; pp. 52-53). In 1954 the Union Pacific closed the mines. The 1950 population of Hanna had been 1,326, the 1960 population was 625, and by the 1970 census it had fallen to 460. Those who stayed earned their livings in a variety of ways -- the railroad, the school, the planing mill which operated from 1955 to 1966, commuting to jobs in nearby communities, or the Rosebud mine when it opened

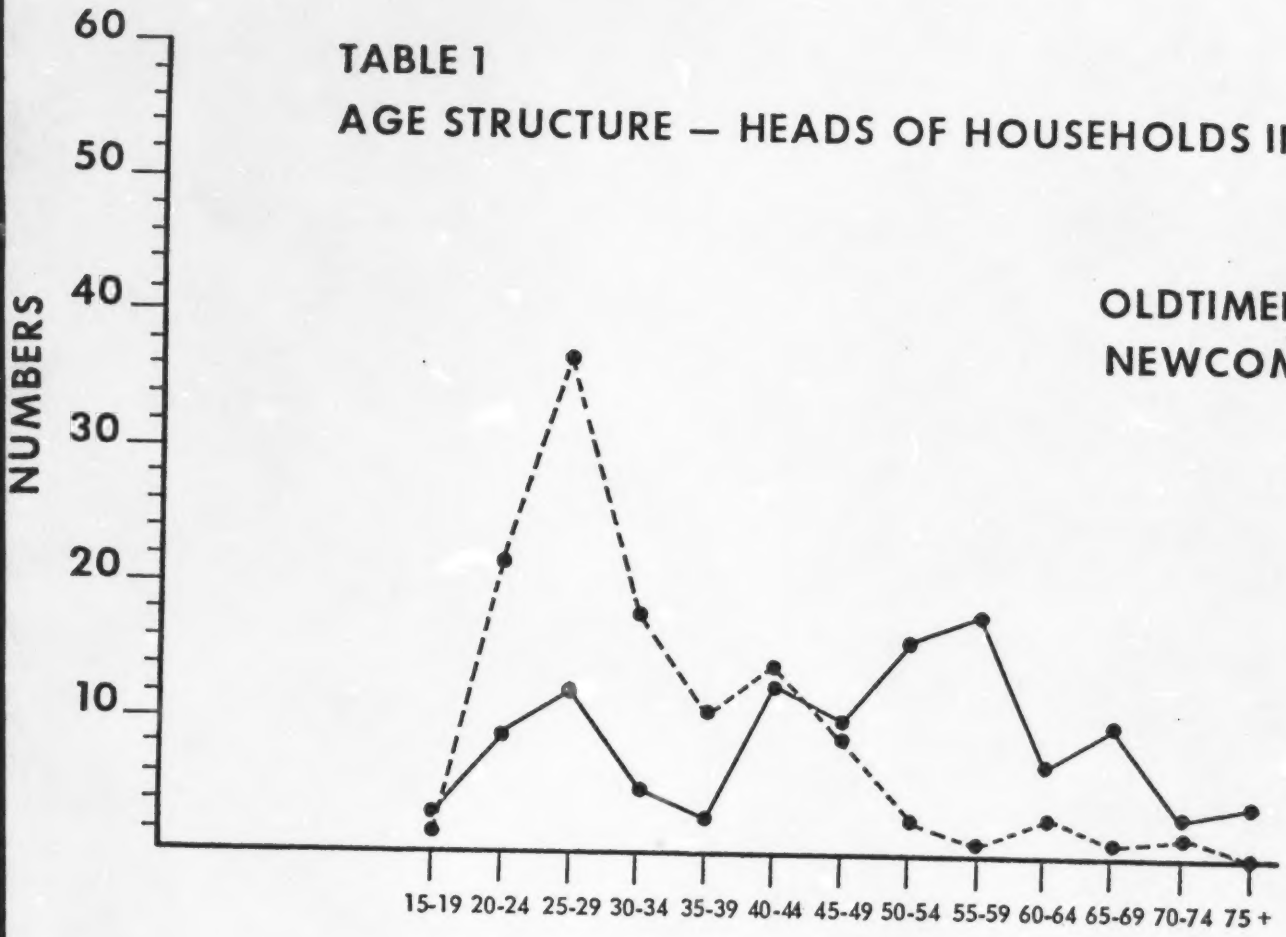
in 1962. The young people left, there were very few heads of households under 30 before the recent boom, in fact the median age of heads of households who were in Hanna prior to this boom was 59 in 1972.

To quickly describe those people who were long time residents of Hanna, an ideal profile is presented. The validity of such profiles has been contested by many social scientists and this or any profile is admittedly limited, but for communicating with state and local politicians, planners, and interested citizens, the ideal profile seems valuable. The important thing to remember is that no ideal profile represents any single individual - the profile is a composite of characteristics shared to some degree by a majority of the group being discussed.

The "oldtimer" in Hanna is 59 years old. Right now he works in the mines, earning between $10,000 and $15,000 a year. A significant minority of his friends are retired and living on social security and pensions. He is a union member and a staunch labor Democrat. He is most likely married, but the children are probably gone from home. If his children are still in town they are quite enthusiastic about the development, meaning new friends and increased activity as it does. The oldtimer is a high school graduate. His religious preference is Protestant. Hobbies are outdoor ones - hunting and fishing. For having lived some years without well developed local services the oldtimer seems very concerned about such services. Hanna did have well developed services for the time prior to 1954. The oldtimer is a strong supporter of the school and all its activities but is not too interested in civic or service organizations. He will say that he values participation in local government, though when asked who or what can get things accomplished

TABLE 1

AGE STRUCTURE — HEADS OF HOUSEHOLDS IN HANNA



in the community he is not very likely to name the mayor or town council. In fact, he probably will not give any positive answer at all to such a question. Finally, the oldtimer is very positive about the new developments.

What Did They Get?

Having taken an overview of the people of Hanna prior to the recent boom we return to the important question already phrased: What benefits will be enjoyed and what costs incurred by the citizens of Hanna as a result of this development? The temptation here is to subdivide and discuss costs and benefits separately, but what is a cost? and, what is a benefit? Once again the complexity of the issue looms large. Is increased population a cost? or a benefit? Does the dust raised by increased traffic balance out against added income by buy vacuum cleaners? These decisions rest with those experiencing the development, not with the researcher. The researcher's role is to provide facts needed for an accurate assessment of the costs and benefits.

New Neighbors

One of the best answers to "What did they get?" is, "new neighbors". In 1970[1] there were 460 people in Hanna and 53 in the neighboring - two miles east - town of Elmo. As of December, 1972, there were 1,085 people between the two towns. Hanna had nearly doubled in population since 1970 with 858 persons. These figures were extrapolated from questionnaire data on family size and checked against the number of water hook-ups and estimates by city officials. Prior to this research no one know how many people there were in town.

Any new neighbor is something, but the real question is what that neighbor is like. Who is that guy in the trailer across the way? A fairly extensive statistical profile of newcomers is provided here. Where appropriate oldtimers and newcomers are compared. The data come from a survey to which 78.2 percent of the households in Hanna responded. The high response rate makes the chances for accuracy very high.

The newcomers are young - median age for heads of households was 25. On the basis of age alone some of the needs and aspirations of these people may be surmised. Table 1 shows the age structure of the new population in contrast with the old.

Eighty-seven percent of the newcomers are married. Sixty-six percent of these have at least one child. If these people stay, the potential for natural population increase is significant.

A frequently commented upon aspect of boom towns is the transciency of their populations. At least one of the mining corporations at Hanna felt that rapid labor turnover was affecting its productivity (Zilkowski 1972). Presumably the most stable of the newcomers would be those who were both married and employed, these persons were sorted out and divided by age. Thirty and under or over 30. The oldtimers were sorted into comparable groups for comparison. Table 2 shows the percentage of each group staying six or more years at their last place of residence.

TABLE 2
Mobility: Six or More Years at Last Place of Residence

	Newcomers	Oldtimers
30 or under	33.3%	50.0%
Over 30	41.0%	71.4%

To provide a second measure of mobility the four groups were also compared on the basis of those staying one year or less at their last place of residence. Tables 2 and 3 make it plain that newcomers are relatively quite mobile.

TABLE 3
Mobility: One Year or Less at Last Place of Residence

	Newcomers	Oldtimers
30 or under	25.0%	18.7%
Over 30	10.2%	4.7%

Expectations of mobility may be important in assessing the future stability of the community. Most of the newcomers were unsure about future plans. Many evidenced knowledge of the nonrenewable resource base, responding that they would stay as long as the mines did. The most meaningful contrast seems to be between those who indicated definite plans to leave and those indicating that they would settle permanently in Hanna. Once again we look at those assumed to be most stable. Table 4 shows that a good many of the newcomers do want to settle permanently in Hanna, but at the same time there are a significant number planning to leave. Considering the relatively high past mobility of the newcomers and the large number who are committed neither to staying or leaving, the potential for turnover seems fairly high.

The educational achievements of a population may indicate a number of things that should be considered by those planning for development. Better

educated citizens are thought to be more active in civic affairs and more demanding of municipal and school services. Educational levels may be linked to political and religious affiliations. Table 5 shows the educational achievements of newcomers to Hanna in comparison with state levels for 1970. Since the Hanna data deals with heads of households, the state data used are those for males. The age breakdown on the state data is 30 and over or under 30 so the groups are not exactly comparable.

TABLE 4
Newcomer Plans for Remaining in Hanna

	Definitely Leaving	Settling Permanently
30 or under	20.0%	25.6%
Over 30	13.1%	34.1%

TABLE 5
Educational Achievements of Newcomers to Hanna

	30 or Under	State	Over 30	State
0-8 Grade	0.0%	4.4%	5.1%	26.5%
9-11 Grade	8.1%	10.6%	20.5%	16.8%
High School Graduate	48.6%	38.7%	41.0%	32.1%
Vo-Tech School Graduate	5.4%	N.A.	5.1%	N.A.
Some College	21.6%	31.9%	17.9%	11.5%
College Graduate	16.2%	13.8%	10.2%	12.7%

Educational achievements of the newcomers are generally higher than state levels. Newcomers also had higher educational achievements overall

than did oldtimers, but their age explained most of the difference. Table 6 compares oldtimers and newcomers 30 or under. These two groups are very similar in educational achievements - the newcomers include more college graduates, but also more high school dropouts.

TABLE 6
Educational Achievements of Oldtimers and Newcomers, 30 or Under

	Newcomers	Oldtimers
0-8 Grade	0.0%	0.0%
9-11 Grade	8.1%	0.0%
High School Graduate	48.6%	50.0%
Vo-Tech School Graduate	5.4%	12.5%
Some College	21.6%	25.0%
College Graduate	16.2%	12.5%

Large population increases present the potential for rapid political change - a possibility that local politicians might wish to consider before welcoming development with open arms. Hanna was strongly Democratic prior to the boom, but that situation changed rapidly. Independent voters grew in numbers at the expense of Democrats with the Republicans gaining slightly. Democrats retained a majority. Table 7 shows the percentage changes.

Just what the impact on an influx like this would be depends on the political composition of the affected community. Hanna is atypical of much of Wyoming in being Democratic, 17 or 23 counties are predominantly Republican (Richard 1969; p. 26). Table 8 gives the figures for the newcomers alone so that they may be compared to any other community. As long

as the net gain goes to Independent voters the potential for change will be difficult to assess.

TABLE 7
Political Composition Before and After Development

	Before	After		Before	After
			Strong	33.7%	20.6%
Democrat	66.3%	55.5%	Moderate	61.1%	62.2%
			Weak	5.2%	16.9%
			Strong	17.6%	25.0%
Republican	14.6%	15.2%	Moderate	58.8%	61.1%
			Weak	26.6%	13.9%
			Strong	5.0%	10.1%
Independent	17.2%	24.1%	Moderate	60.0%	61.0%
			Weak	35.0%	28.9%
None	1.7%	3.8%			

TABLE 8
Political Preferences of Newcomers to Hanna

	Party Preference	Degree of Preference	Percentage
		Strong	20.3%
Democrat	45.0%	Moderate	64.8%
		Weak	14.9%
		Strong	31.5%
Republican	15.8%	Moderate	63.1%
		Weak	5.4%
		Strong	12.8%
Independent	32.5%	Moderate	61.5%
		Weak	25.7%
None	5.8%		

In view of their political preferences it is, perhaps, predictable that the newcomers would not be union members. Only 29.9 percent are union members.

The newcomers to Hanna enjoy high incomes - the median being between $10,000 and $14,999. The state median in 1970 was $8,943. A substantial number have incomes above $15,000. Table 9 shows the percentage breakdown of the newcomers by income. These high incomes are a major incentive for those coming to a boom town.

TABLE 9
Incomes of Newcomers to Hanna

	30 or Under	Over 30
$3,999 or less	1.1%	0.0%
$4,000 - $6,999	1.1%	1.1%
$7,000 - $9,999	25.0%	11.1%
$10,000 - $14,999	55.5%	52.7%
$15,000 - $24,999	11.1%	30.5%
$25,000 or more	1.1%	1.1%

The most interesting aspect of income distributions at Hanna involves a gap between oldtimers who are working and newcomers who are working. Tables 10 and 11 show this gap clearly - the percentages given indicate the portion of the group earning less than the indicated amount. This gap is most noticeable in the over 30 group where 92.9 percent of the oldtimers earn less than $14,999 and only 64.9 percent of the newcomers earn less than that. This means that oldtimers are not employed in higher paying

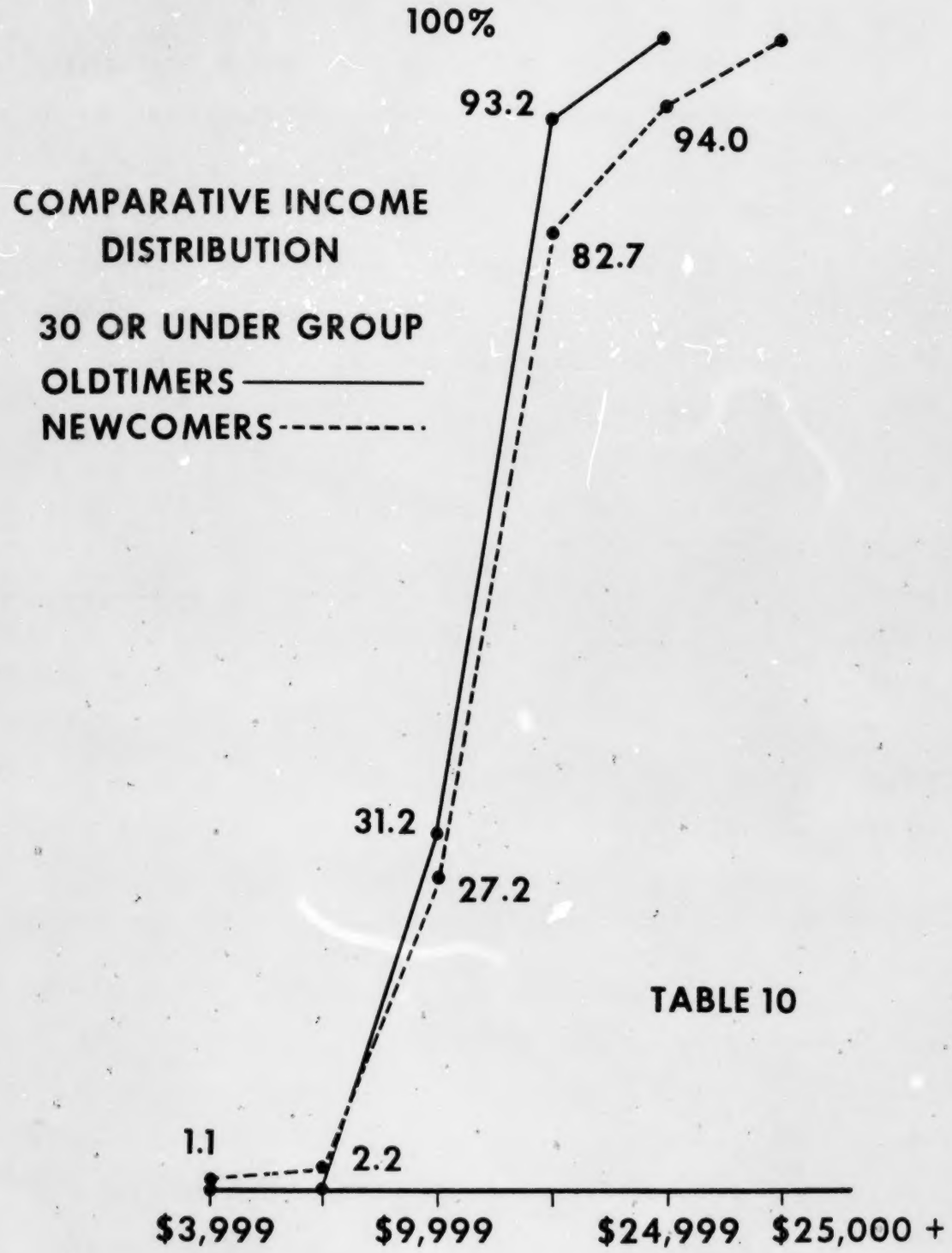

100%
93.2
94.0
COMPARATIVE INCOME DISTRIBUTION
30 OR UNDER GROUP
OLDTIMERS
NEWCOMERS
82.7
31.2
27.2
1.1
2.2
$3,999
$9,999
$24,999
$25,000 +

TABLE 10

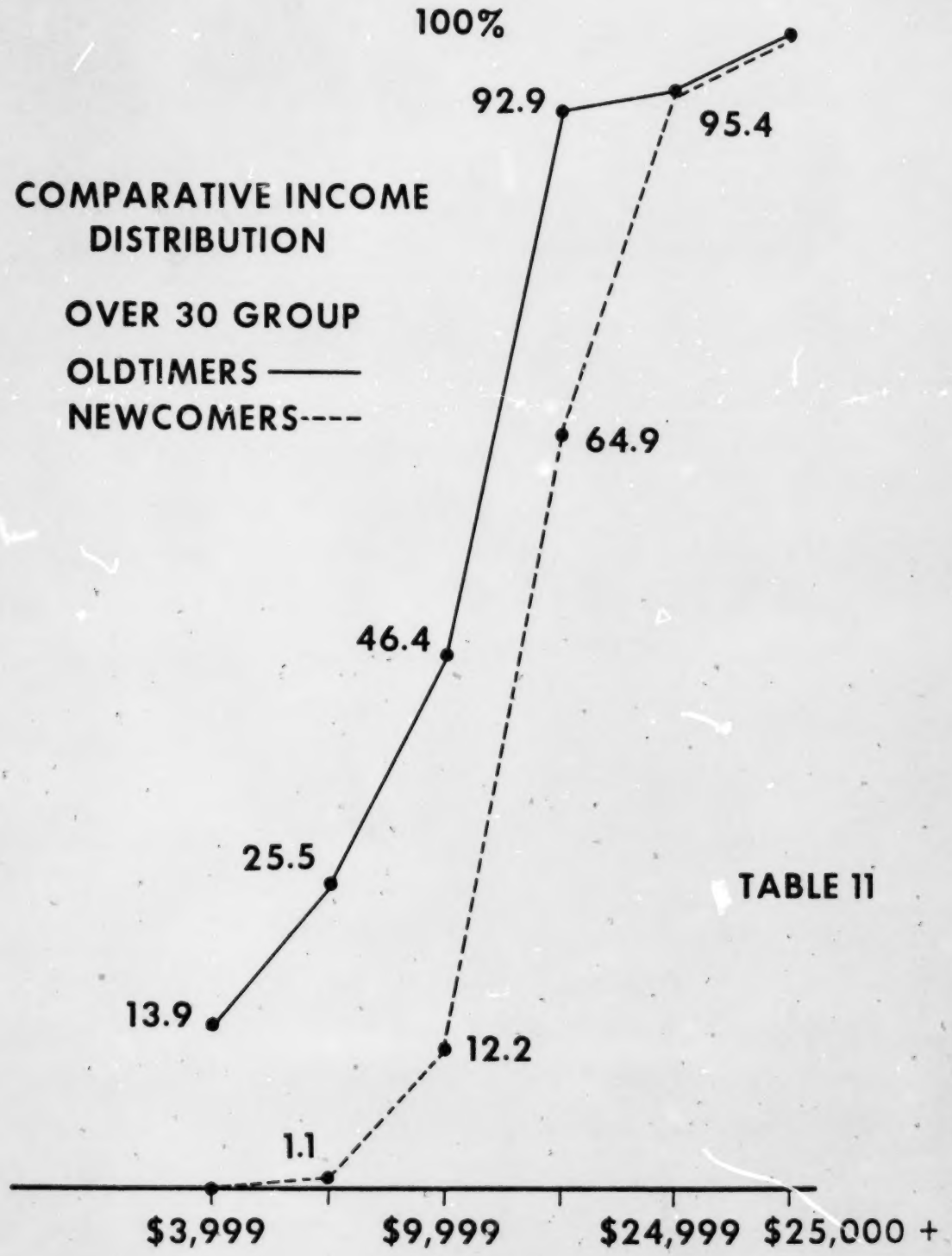

100%
92.9
95.4
COMPARATIVE INCOME DISTRIBUTION
OVER 30 GROUP
OLDTIMERS ——
NEWCOMERS----
64.9
46.4
25.5
13.9
12.2
1.1
$3,999
$9,999
$24,999
$25,000 +

TABLE 11

positions - either as administrators or skilled craftsmen. Only 18.1 percent of those listing their occupation as administration or supervision were oldtimers and only 10 percent of the highly paid welders were oldtimers.

Recreational activities of the newcomers are mostly outdoors sports, mainly hunting and fishing.

In anticipating development it would be useful to know priorities incoming citizens might place on various community services. The newcomers evaluated nine types of community services, indicating which were necessary, which important, but not necessary and which were not important. Tables 12 and 13 show the results for the age groups. Some difference between the age groups are evident, for instance in the demand for recreational facilities. Both groups place high value on the basic services and lower values on voluntary associations and educational opportunities.

TABLE 12
Community Services Evaluations by Newcomers 30 or Under

	Necessary	Not Necessary
Retail Shopping	86.6%	0.0%
Good Streets and Roads	78.9%	2.6%
Good Schools	94.7%	0.0%
Sanitary Facilities	94.7%	0.0%
Youth Organizations	73.6%	2.6%
Civic-Service Groups	34.2%	5.2%
Continued Learning	50.0%	2.6%
Recreational Facilities	78.9%	0.0%
Participation in Local Government	42.1%	7.8%

The typical small town multiplicity of organizations is found in Hanna, however, suggesting that relatively few people support several organizations.

TABLE 13
Community Services Evaluations by Newcomers Over 30

	Necessary	Not Necessary
Retail Shopping	82.5%	2.5%
Good Streets & Roads	75.0%	2.5%
Good Schools	92.5%	0.0%
Sanitary Facilities	92.5%	0.0%
Youth Organizations	52.5%	2.5%
Civic-Service Groups	27.7%	2.5%
Continued Learning	25.0%	5.0%
Recreational Facilities	52.5%	5.0%
Participation in Local Government	44.5%	0.0%

The priorities of oldtimers and newcomers match fairly well, though intensities differ. Oldtimers place even less value on civic-service organizations and continued learning. They place more value on participation in local government, but the newcomers are more likely to favorably mention the mayor or council when asked about civic action possibilities. Newcomers seem more confident about their ability to accomplish things in the community.

The oldtimers over 30 did not seem to show the lack of concern about basic services that might be expected of a population adapted to living without such services - those under 30 did seem to show this adaptation. Perhaps the older oldtimers recall the relatively well developed services prior to 1954. Table 14 compares oldtimers 30 or under with newcomers 30 or under. Clearly,demands for services of most types will be greater from the newcomer.

TABLE 14
Community Services Evaluations of Oldtimers and Newcomers
30 or Under - Those Checking Necessary

	Newcomers	Oldtimers
Retail Shopping	86.8%	68.7%
Good Streets and Roads	78.9%	81.2%
Good Schools	94.7%	87.5%
Sanitary Facilities	94.7%	75.0%
Youth Organizations	73.6%	50.0%
Civic-Service Groups	34.2%	12.5%
Continued Learning	50.0%	50.0%
Recreational Facilities	78.9%	56.2%
Participation in Local Government	42.1%	56.2%

Using this statistical profile, we can characterize the newcomer to Hanna as being about 25 years old, married with one child and working for a coal company at a very high rate of pay. He is not a union member. He is a Democrat or an Independent voter, if a Democrat, his party ties are

not strong. The newcomer has probably moved around quite a bit in the past - he is not sure about future moves. He takes his recreation outdoors, hunting and fishing, but would appreciate more in-town recreational facilities. The newcomer is a high school graduate. His demands on municipal services are high, and he has confidence in achieving community action.

All those "new neighbors" need more than a space to set their trailers on. Local services must double when population doubles. New services may have to be added. Along with new neighbors the citizens of Hanna found themselves getting more services and new services.

More Services, New Services

The problem of housing development workers is usually solved by the use of mobile homes. Even trailer houses occupy space, however, and space has ended up being at something of a premium in Hanna. Figure 2 shows additions to the occupied town site made in 1970, 1971, and 1972. As the trailers moved in the price of stationary dwellings took a big bound - prior to the boom, a house and lot might be purchased for less than $200. Today the same property would bring $3,000. Shrinking space and rising prices have added up to a housing shortage. The population density has risen substantially. It is a common practice to site trailers in between row houses on standard lots. One trailer court squeezed 19 trailers into a half acre. The housing shortage has also occasioned a great deal of commuting - workers in mines around Hanna commute from Rawlins - 40 miles; Medicine Bow - 19 miles; and Elk Mountain - 14 miles. The costs of commuting may take a significant portion of the high wages attracting workers to the mines. Traffic accidents may

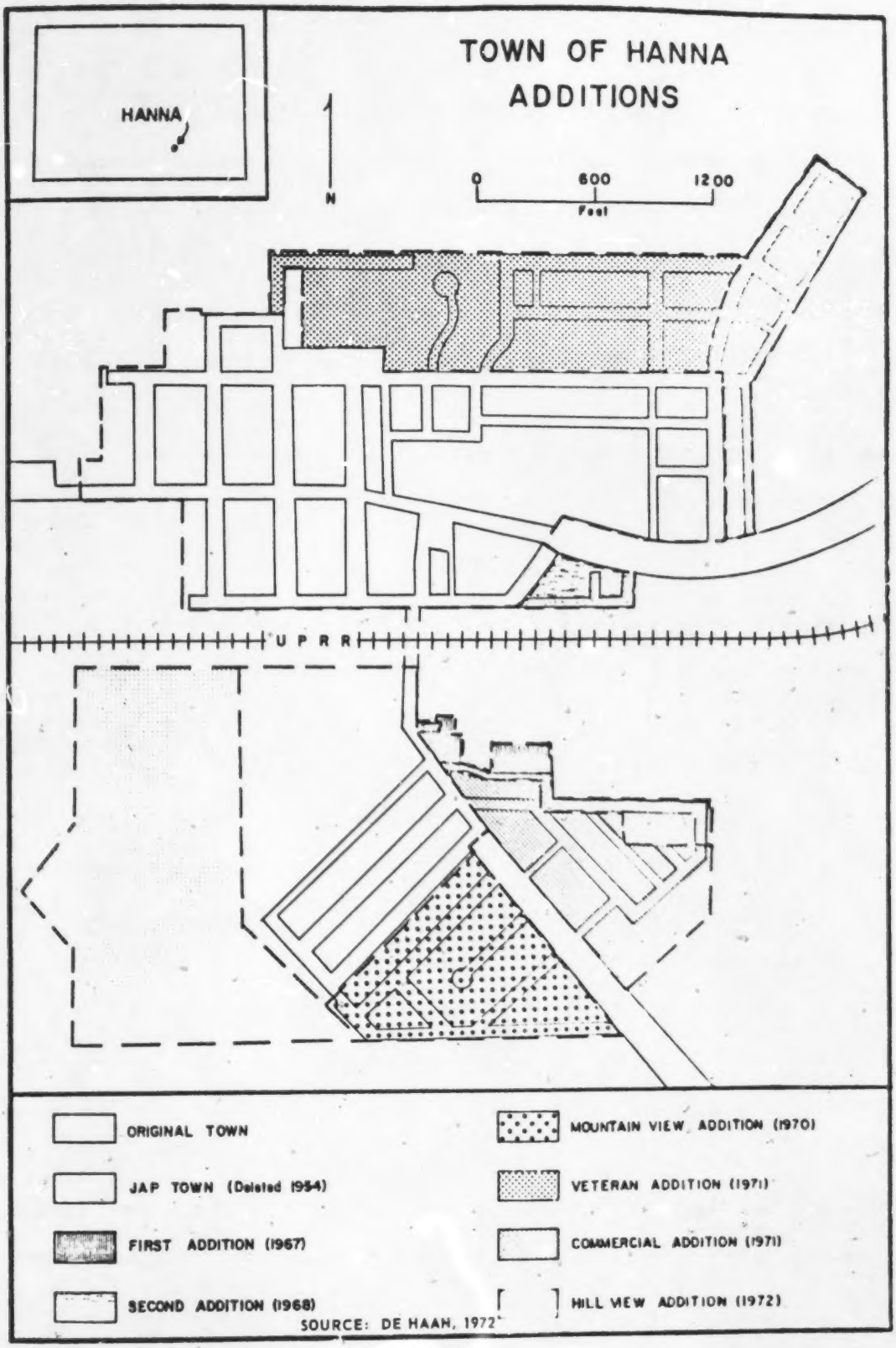

TOWN OF HANNA
ADDITIONS
HANNA
N
0
600
1200
Feet
U P R R
ORIGINAL TOWN
JAP TOWN (Deleted 1954)
FIRST ADDITION (1967)
SECOND ADDITION (1968)
MOUNTAIN VIEW ADDITION (1970)
VETERAN ADDITION (1971)
COMMERCIAL ADDITION (1971)
HILL VIEW ADDITION (1972)
SOURCE: DE HAAN, 1972

FIGURE 2

also increase. State Highway Department figures showed accidents within the town limits more than doubling per capita (Uthoff 1973).

All the new homes, stationary or mobile, must be served by utilities - electricity, gas, telephone, water, sewer and garbage disposal services must be provided. Water and sewer facilities for 5,000 people were installed with the help of a bond issue and federal loans. An adequate landfill site is still being sought. No pipeline natural gas is available and the high cost of propane is a frequent complaint. Local officials are trying to persuade a major company to bring gas in from a pipeline located only a few miles south of town - to date they have been unsuccessful.

Utilities are not the only requisite services. Emergency services are necessary. A police force, consisting of the chief and a trainee, has been established and equipped. An ambulance was donated by one of the companies. The fire department is a volunteer one - no new equipment has been added to serve the larger population. There is no doctor - the closest are in Rawlins 40 miles away. Recently a paramedic has moved to Hanna, working under the direction of a Rawlins physician. This Medex, as he is called, can perform many useful functions - physical checkups, treatment of colds and flu, taking of X-rays, treating minor fractures, giving injections, and in some cases prescribing medication. Weekly visits by a physician have also been arranged.

Traffic in Hanna rose 39.3 percent from 1970 to 1972. Increased traffic pointed up the well known problem of the town being neatly bisected by the railroad yards. Railroad traffic also increased as coal trains - which are slow compared to the usual fast freights - moved through the yards. Financing for an overpass was secured then lost in a presidential budget cut - no

community, boom town or otherwise, is independent of the larger system. Only one street, a state highway, is paved. Problems of dust in the summer and mud in the spring are apparent. There are no street signs, no storm sewers, no sidewalks, and few streetlights.

The town has no recreational facilities, other than the bars. A summer program for young people is operated by the school and town council. There are no parks, no theatres, no bowling alleys. There is talk of a bowling alley and a drive-in restaurant. Considering the emphasis on recreation in the community services priorities, recreational facilities are probably sound investments.

There was one retail business in Hanna before the boom, a combination liquor store and sundries shop. Since the development a shopping center has opened and is already expanding. The Wyoming Bancorporation has applied for a charter to open a bank. Substantial investments in retailing have following the mining. The rapid construction of such things as supermarkets and hardware stores lends to the optimistic, boom feeling.

The school population has grown rapidly. There were 279 students at the Hanna-Elk Mountain school in May 1972. In December 1972 there were 388. Classroom space is dwindling rapidly. Fifth and sixth graders are making a 28 mile round trip by school bus to Elk Mountain in order to find classrooms. In small schools, required courses are usually taught to a whole grade level at one time - two grades were split in 1972, in 1973 there will be four. The recently begun kindergarten level will have to leave its present classroom to make space for needed junior and senior high classes. What can be said for space can also be said for staff. All teachers are carrying full

class loads right now. The constant turnover of students has made course planning harder. Teachers feel that newcomers are more demanding of school services while their children are harder to discipline.

Development has occasioned a graphic expansion of public and private services in Hanna. With some basic services inadequately provided for it seems certain that the expansion will continue. The question central to an accounting of costs and benefits at this point is "Who foots the bill?"

Investments in housing and retailing are private risks which could not be dealt with in this study. It is worth noting that one of the corporations, Energy Development Corporation, has become involved in the housing business - encouraging permanent housing by buying and laying out a subdivision.

The expansion or addition of utilities and other services requires substantial capital investments, as well as operating costs. These capital investments can only be financed by the community incurring debt. The water system expansion and the addition of a sewage system were financed by a $150,000 bond issue and by grants of $106,000 from the Farmer's Home Administration and $12,900 from the Environmental Protection Agency. The improvements or addition of other services will increase this debt. Federal funds have been necessary to help pay the new policemen from the Omnibus Crime Act and P.E.P. One and one half million dollars or so of federal and state funds will go into the overpass if it is constructed. A very large outside subsidy of grants or loans has been required to improve a few municipal services.

The town budget for 1971-72 called for total expenditures of $61,037.13 for the general fund, water department, and police department. The budget included a reserve of $1,098.81. The next year's budget (1972) called for

expenditures of $83,000.00 - a jump of better than 35 percent. The general fund expenditures jumped more than 55 percent. The 1972-73 budget balanced with no reserve. This balanced budget, of course, accounts for none of those outside grants - the town was actually using considerably more money than it took in.

While all the spending was taking place, revenues from utilities payments and various taxes were rising. The potential for revenue, however had not risen as fast as the population - population rose 87.3 percent, assessed valuation only 65.8 percent. The general mill levy could not be increased during this time as Hanna was already taxing at the maximum legal levy in 1970, before the boom really got under way. With the tax rate static and population increasing faster than valuation, the per capita tax base fell from $562.12 to $499.87 - without outside subsidies the per capita level of services could also drop. Table 15 summarizes changes in assessed valuation and mill levy from 1970 to 1972.[2]

TABLE 15
Assessed Valuations and Mill Levies; 1970-1972

	1970	1971	1972
Assessed Valuation	$258,583.00	$271,767.00	$428,888.00
General Mill Levy	8.000	8.000	8.000
Bond & Interest	0.000	17.000	12.000
Total City Levy	8.000	25.000	20.000
County Mill Levy	57.200	56.800	53.400
Total Mills	65.200	81.800	73.400

The rising mill levy shown in Table 15 was accompanied by the possibility of declining per capita services - a real double bind situation. Hanna residents paid the highest city levy in Carbon County in 1972. Some relief was being provided by declining county levies, this also being a largely external "subsidy".

Trailer houses are the signal characteristic of boom towns where housing is short. The impact of mobile homes on local taxes was severe prior to the 1973 Wyoming Legislative session when all trailers wider than eight feet were removed from the motor vehicle classification. The current way of taxing an eight foot trailer illustrates the problem that applied to all trailer homes in Hanna during this study. Compare an eight foot wide trailer worth $10,000 and an ordinary house of equal value. Paying taxes based on depreciation, the trailer would contribute $109.80 to Hanna over five years at current rates. The stationary dwelling would pay $180.00 over the same period - the house making a considerably greater contribution than the trailer.

School finances pose even more of a problem, at least when it comes to capital improvements. Voters in a large unified school district including three high schools and a number of elementary schools will have to approve of any bond issue improving facilities in this one part of the district. School officials presently are thinking in terms of remodeling present facilities and using mobile classrooms.

The population increase accompanying energy development in Hanna has required the addition of new services - sewer system, police force - and the expansion of old ones - the water system. The community has gone into debt

to cover the costs of improving only a few services. Taxes have gone up drastically. The new population has not been accompanied by a proportional expansion of the tax base - as demands for services rise, the town actually loses ability to provide services on a per capita basis. Without outside funding it is probable that services in Hanna would be less now than they were before the boom.

Recommendations

Although the accounting of costs and benefits is up to individual citizens, all of the events happening during energy resource developments are something to be dealt with. It seems appropriate to conclude this study with some recommendations as to how to maximize benefits and minimize costs during developments such as the one just described.

1. The state should require energy resource developers to file extensive impact statements accurately detailing the extent and duration of their developments. The statement would include anticipated impacts on local government, land use patterns, population, and economics.

No one in town knew the population. Officials had little if any information about the duration of the development or future expansion possibilities. Rumors about the development are an obvious part of conversation everywhere in town. Adequate community planning cannot proceed on the basis of rumors. Impact statements of this type would make planning for development rationally a possibility. Citizens need accurate information before they can calculate costs and benefits of proposed developments - if benefits will exceed costs the developer need not be afraid to make such information public.

2. Comprehensive community planning processes should be established before the boom arrives. Local people should establish some direction for their community before the trailers roll in. The planning should take into account; a) a maximum population desirable, b) a minimum level of community services desirable and its costs, c) the layout of the community including sites for recreation, population density limits, and the quality of housing desired, d) the expansion of utilities along the plan laid out, and e) some means of stabilizing the economy.

Planning provides long time residents some protection of preferred life styles if it is done before the development. It will save time in dealing with the development. It may provide some ideas of costs before, instead of after the boom. Residents may wish to find an economic base other than energy resources, if possible, in order to stabilize their community.

3. In order to maximize income gains and employment gains for state residents the schools must begin considering the needs of the energy industries in their curricula.

It has been seen that a good number of the newcomers to Hanna were from out of state. It has also been seen that Hanna oldtimers were not in the higher paying development jobs. If citizens of Wyoming are going to benefit in this most obvious way of increased income they will have to be prepared to handle the new jobs.

4. An impact tax should be added to the severance tax and paid to impacted communities.

The energy industry is not an enduring one where it is based on fossil fuels. Chances are that debts will last longer than some developments. That larger debts are likely to be incurred is certain and it is equally certain that revenue brought in by increased population cannot pay these debts off at once; in fact, at Hanna the population increase has decreased per capita payments. Taxes are going to rise to pay these debts over long periods. People living on fixed incomes like many oldtimers in Hanna will find their real income shrinking. As debts and taxes rise, a fortune in mineral wealth leaves the area in eastbound unit trains. It seems logical that some of this wealth be applied to problems created by its extraction. Costs to the corporations will be passed on to energy consumers and this, too, seems logical - consumers should help pay off the social costs of their comfort and convenience. The impact tax seems to be necessary to turn many costs of energy development into local benefits in the form of better services.

Footnotes

1. All figures cited for state populations and for Hanna prior to the research in 1972 are from the Census publications on General Social and Economic Characteristics, Detailed Characteristics, or Population of Places for the year indicated.

2. This tax base information comes from publications of the Wyoming Taxpayer's Association and the state statutes.

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